BUILDING STANDARDS COMMISSION
2525 Natomas Park Drive, Suite 130
Sacramento, California 95833-2936
(916) 263-0916 FAX (916) 263-0959

April 7, 2011

Kecia Harper-Inhem
Riverside County Fire Department
2300 Market Street
Riverside, CA 92551

Dear Ms. Harper-Ihem:

This letter is to acknowledge receipt on March 23, 2011, of the Riverside County Fire Department submittal pertaining to Ordinance No. 787.6 with findings and is acceptable for filing. Your filing attests to your understanding that according to Health and Safety Code Section 17958.7 no modification or change to the California Building Standards Code shall become effective or operative for any purpose until the finding and the modification or change have been filed with the California Building Standards Commission (the Commission).

This letter attests only to the filing of these local modifications with the Commission, which is not authorized by law to determine the merit of the filing.

As a reminder, local modifications are specific to a particular edition of the Code. They must be readopted and filed with the Commission in order to remain in effect when the next triennial edition of the Code is published. In addition, should you receive Fire Protection District ordinances for ratification, it is required to submit the ratified ordinances to the Department of Housing and Community Development [H&SC Section 13869.7(c)], attention State Housing Law Program Manager, rather than the Commission.

If you have any questions or need any further information, you may contact me at (916) 263-0916.

Sincerely,

Enrique M. Rodriguez
Associate Construction Analyst

cc: Chron
Local Filings

RIVERSIDE COUNTY FIRE DEPARTMENT
IN COOPERATION WITH
THE CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION
2300 Market St., Riverside, CA 92551 (951) 955-4777 fax (951) 955-4886

LOCAL AMENDMENT JUSTIFICATION/Statement Of Reason

Building Standards Law allows local amendments in accordance with the following:

For purposes of this subdivision, a county may make reasonably necessary modifications to the requirements, adopted pursuant to Section 17922, contained in the provisions of the code and regulations on the basis of local conditions.

§17958.7. (a) Except as provided in Section 17922.6, the governing body of county, before making any modifications or changes pursuant to Section 17958.5, shall make an express finding that such modifications or changes are reasonably necessary because of local climatic, geological or topographical conditions. Such a finding shall be available as a public record. A copy of those findings, together with the modification or change expressly marked and identified to which each such finding refers, shall be filed with the California Building Standards Commission. No modification or change shall become effective or operative for any purpose until the finding and the modification or change have been filed with the California Building Standards Commission.

Section 103.4.2 This section has been brought over from the previous Ordinance No. 787 has been re-worded to meet the current language of the California Fire Code.

Added 104.2.1 This language existed in the previous Ordinance No. 787 and was carried over for the new code cycle and is necessary for reproduction costs to coincide with Riverside County Ordinance 671.

Section 104.3.2 This section was carried over the existing Ordinance No. 787. It is imperative that cooperation in enforcement be disseminated to other law enforcement entities within the Riverside County area because of its vast topograghy and diversity. This gives the Riverside County Fire Department greater enforcement capabilities due to logistics and the presence of these other agencies across the County of Riverside

Section 104.12 This section is carried over from the existing Ordinance No. 787 and grants authority to the Fire Chief, in cooperation with the Board of Supervisors, for closures into any hazardous fire areas due to any climatic events such as but not limited to "red flag warnings", damaging weather events, dry conditions as determined by the Fire Chief and other matters related to.

Chapter 2 Definitions;

Fire Chief was added to designate that this title meant the Fire Chief of Riverside County whenever the wording was to appear in the model code. This is to distinguish obligatory authority to the Fire Chief or any of the designated representatives for fire

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prevention measures and declarations in enforcing codes required because of local climatic, geological, or topographical conditions.

Hazardous Fire Area: This definition is provided due to requirements required pursuant to Government Code Sections (C),51178 and 51189 51179. (a) A local agency shall designate, by ordinance, very high fire hazard severity zones in its jurisdiction within 120 days of receiving recommendations from the director pursuant to subdivisions. This definition provides clarity into the description of what constitutes these topographical areas and provides maps as required by state law for public view and designation.

Fire Protection Engineer: This was added to give guidance when requiring section 2304.2 of Ordinance 787 in what a Fire Protection Engineer scope of practice is and how it relates to the requirement of the section.

Section 404.2 #15 Due to the difficulty of access as well as evacuation issues in regards to these type of structures and topographical, geological issues of where these structures may be located, it is necessary to provide provisions that will help in evacuation procedures to help ensure better fluidity of exiting.

Section 503.3 This section is further enhancement to section 503.1 in ensuring proper identification of the Fire Lanes.

Section 503.4 This is to provide the Chief with additional fire protection mitigation measures do to topographical concerns that may arise that would necessitate the fire department access roads to be further away than what is required by code. This can be due to geological conditions, sensitive habitat areas, or anthropological concerns.

Section 503.7 This section provides additional width for apparatus access roads due to topography enhancements by owners that may interfere with operational access needs.

Section 503.8 The fire department shall desigate fire apparatus access roads and fire lanes for purpose of access and fire fighting operations. Proper access is a must for any operation even if it is medical or operational this will give the fire department key governing authority to have proper fire lane delineation to accomidate access given the specific layout because of local climatic, geological, or topographical conditions that arise in Riverside County.

Section 504.1 This section is amended to ensure that the site has a flat finished surface for ground latter access which is not currently addressed in code and due to

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Riverside County's diverse topography is necessary to provide means for first responders to safely deploy ladders for rescue operations.

Section 510.4: This section pertains to emergency response personnel communications, to ensure effective and reliable communications exist within the defined structure(s) and/or area surrounding the structure(s). This ordinance is being adopted not only to provide for the safety of the emergency response personnel, but ultimately the public we serve within the County of Riverside.

This ordinance is modeled after many similar ordinances adopted by cities within Riverside County including the Cities of Riverside and Palm Springs. Similar ordinances have also been adopted in the Cities of Burbank, Costa Mesa, Glendale, Irvine, Ontario, Las Vegas, and San Diego. Numerous Counties across the Nation have also adopted this technology into ordinances including the County of Sacramento Ca, Broward County FL, and Clark County NV.

Due to continual growth and new construction of commercial and residential areas within the County of Riverside, the current radio signal levels present within and surrounding many of the new structures has proven inadequate to support reliable emergency response personnel communications. One of the largest factors in the loss or degradation of signal is due to building size, interior design, and new building standards designed to improve building survivability during earthquakes, protect occupants from Ultra Violet Rays, etc. The stricter building codes in effect in California result in the use of construction materials which naturally absorb and/or reflect large amount of radio signals. These materials include, but are not limited to concrete, rebar, steel studs in place of wood, insulation materials, wire mesh in stucco, and even glass. Some of the current window construction materials utilize a UV coating that blocks harmful Ultra Violet rays, which can also reflect radio signals that would normally be able to enter a building through a window. The new building standards that offer more protection to the buildings occupants from earthquakes, UV rays etc, have now caused a great impact on radio communications by basically blocking all, or a large portion of the available radio signal level from reaching the emergency response personnel.

The adoption of the installation and use of "Signal Amplification Devices" also known as a B.D.A. (Bi-Directional Amplifier) will ensure that the necessary radio frequencies will function within and surrounding buildings and structures within the County of Riverside. The BDA will by design, take an existing acceptable radio signal level from outside a building or structure, and re-distribute the signal throughout the building. The BDA will pass radio communications in two directions, enabling the emergency response personnel to "talk out" of the building or structure to the Emergency Command Center or Incident Command, as well as receive routine

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communications and also vital time critical information or evacuation orders. There have been many unfortunate incidents throughout the country that could have been avoided with a properly installed and operational B.D.A. Many times an evacuation order has been given by Incident Command Staff, or even emergency response personnel from within the structure, that was not effectively received by all personnel on scene. With the use of a B.D.A. to help overcome the natural effect of radio signal absorption of the structure, these unfortunate incidents should be greatly reduced.

The Riverside County Fire Department endorses the use of Bi-Directional Amplifiers, and other radio enhancement systems as defined in section 511.01.2 of the ordinance. These devices are critical to the safety of our sworn emergency response personnel, as well as the life and safety of the citizens of Riverside County. These Topographical features of these structures requires the Riverside County Fire Department to amend the code to ensure proper communication with all first responders.

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Department to amend the code to ensure proper communication with all first responders.

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Section 511

It is acknowledged that a major fire in a high-rise structure requires extraordinary amount of personnel to suppress the fire as well as communicate, provide breathing support functions, evacuation teams, officers for command operations, truck companies and engine companies. The majority of the personnel will be assigned to logistic functions, specifically to Ground Support.The function of Ground Support is to move equipment and supplies from Base (ground level parking for fire apparatus) to the Staging Area inside of the building, normally two to three floors below the fire floor. With a fully evolved fire it could encompass as many as 250 to 300 support personnel and with any type of terrorist involvement it could easily double the amount with different agencies involved.
The primary item needed by fire fighters to help ensure a tenable environment in which to suppress the fire and provide rescue operations is air bottles. This is needed so the responding personnel who is working the fire do not breathe the toxic and superheated gases associated with materials of combustion. Recognizing that Riverside County is still a suburban/rural county, with a vast amount of Topography, climatic and Geological diversities, the Riverside County Fire Department can become overwhelmingly taxed of resources to quickly assemble personnel on scene of a major high-rise fire in a timely manner. Therefore it is necessary and prudent to place

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into high-rise structures a system to mitigate the need for a large number of fire department personnel to be assigned to Ground Support. A pre-plumbed system that allows for the filling of air bottles inside of the building will accomplish this objective. Geologically Riverside County is criss crossed with Major fault lines including but limited to the San Andrea's Fault. 47,375 earthquakes were recorded in and adjacent to Riverside County between 1868 and August,1999. From 1932 to 1981, as the SCSN grew, so did the catalog of smaller earthquakes. Since 1983, the SCSN has had a complete record of earthquakes to about the magnitude 1.8 level. This adds a huge number of earthquakes to the catalog, as the number of earthquakes increases approximately ten-fold with each decrease in magnitude point. So, for every magnitude 4 that occurs, there are 10 magnitude 3 earthquakes, 100 magnitude 2 earthquakes, and 1000 magnitude 1 earthquakes. Topographically these structures are located near these seismically active areas an event as described can easily occur requiring vast resources to control. The personnel that is traditionally utilized in the breathing support operations of transporting bottles back and forth from ground level to the fire floor could be utilized in other life saving operations.

Section 606.8 To ensure that the audible and visual notification has a standard to follow and has a known result. The systems are basically determined and regulated by the manufacturers. There is no language to distinguish regulations on how to install the systems. This section will provide a better delineation. Due to the amount of hazerdous materials that can be presented in a refrigeration system, including Amonia early detection is imperative and would increase response time and do to the geological diversity of Riverside County a leak in one of these facilties is quite probable. The standard is needed to provide proper installation practices and maintenance methods to adhere to.

Section 903.2 Automatic sprinkler systems have been successfully used to protect industrial and commercial buildings and their occupants for more than 100 years. Historically the place which has offered the least amount of fire protection to occupants **was and still is their own home.** This was brought to light in 1973 by the Report of the National Commission on Fire Prevention and Control, America Burning. **At the time of the report approximately 8,000 people died in structure fires every year in the United States. Nine out of ten of those victims died in their home. In the 25 years since America Burning was published the number of lives lost in fires in the United States has decreased to approximately 4,000 per year. Unfortunately 8 out of 10 victims still died in a residential structure fire. While residential sprinkler installations are increasing, it is estimated that less than 3 % of the one and two family homes in the United States have them installed.** Another aspect of the residential fire problem involves the demographics of residential fire fatalities. Children 4 years of age and under and adults 60 years of age and older

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are more likely to die in a fire than other segments of the population. For adults over 60, the risk increases significantly with age. **Because these high-risk groups may depend on assistance to exit the dwelling, "anything less than automatic suppression may not be enough to save them".**
Another group that can benefit from the use of residential sprinklers is firefighters. The majority of firefighter deaths and injuries on the fire ground occur at residential fires. National Fire Administration. **It shows that approximately 73% of firefighter fire ground injuries occur at residential fires. Twice as many firefighters are injured each year performing fire ground duties as there are fire injuries to the civilian population (43,000 vs. 23,100 in 1998) from reported fires. It is important to recognize that, in addition to their fast-response characteristics, residential sprinklers have a special water distribution pattern. Because the effective control of residential fires often depends on a single sprinkler in the room of fire origin, the water distribution pattern of residential sprinklers is required to be more uniform than that of standard spray sprinklers, which in large areas can rely upon the overlapping patterns of several sprinklers to make up for voids. Additionally, residential sprinklers are required to wet sofas, drapes, and similar furnishings at the periphery of the room. In their discharge patterns, therefore, the sprinklers must not only be capable of delivering water to the walls of the areas where they are installed, but high enough up on the walls to prevent the fire from getting "above" the sprinklers. The water delivered close to the ceiling not only protects the portion of the wall close to the ceiling, but also enhances the capacity of the spray to cool gases at the ceiling level, thus reducing the likelihood of excessive sprinkler openings. According to the National Fire Sprinkler Association there are currently 90 cities and counties within the state of California that have a residential sprinkler ordinance.**
AWWA Research Foundation has published the following report: *Impact of Fire Flow on Distribution System Water Quality, Design, and Operation.* This report concludes the following:

"Water-efficient fire suppression technologies exist that use less water than conventional standards. In particular, the universal application of automatic sprinkler systems provides the most proven method for reducing loss of life and property due to fire, while at the same time providing faster response to the fire and requiring significantly less water than conventional fire-fighting techniques. It is recommended that the universal application of automatic fire sprinklers be adopted by local jurisdictions."
Aside from fire fighting and explosion fatalities, there has never been a multiple loss of life in a fully sprinklered building due to fire or smoke. All fire protection features have a reliability factor. Walls and shafts can be breached by means of poke-throughs and building alterations. Exit doors can be blocked or locked.

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A residential fire sprinkler is a fast response sprinkler, making the time of activation much less than that of a conventional fire sprinkler. Additionally, the special discharge characteristics of a residential sprinkler allow it to throw water within 28 inches of the ceiling. This high wall-wetting pattern, along with the fast response, helps the residential sprinkler control or suppress typical residential fires using water flows much lower than those associated with traditional commercial.

Now that the California Residential Code is requiring that all one and two family dwellings be protected by sprinklers is still imperative based on the geological, topographical, climatic diversity of Riverside County to continue to protect all structures greater than 3,600 sqft to be protected by Fire Sprinklers, to ensure faster suppression to those occupancies that would not normally be required to be protected which would exhaust a number resources including water which climatically is so precious to our environment as a whole. It will provide for less run off into ground water due to suppression activities and less pollutants into the environment.

Mobile homes are a part of the American landscape. In 2007 alone, more than 95,000 manufactured homes were shipped nationwide. Manufactured housing also accounts for approximately 10 percent of the single-family structures in the United States. Despite the fact that we drive by them, respond to medical calls in them, and sometimes live in them, we often overlook mobile homes when it comes to training and prefire planning. However, as the deaths of two firefighters in Craigsville, West Virginia, last February showed, mobile homes can pose significant, and sometimes deadly, challenges. The burning mobile home is a less-than-stable platform, making search and possible rescue of occupants even more dangerous. The exterior walls are flimsy compared with those of most site-built homes. The narrow halls complicate search. If the first-due engine pulls up and the mobile home is burning from end to end, your strategy has been decided for you. You have to knock down the fire to move in. If the home is in a mobile home park, again, protecting exposures is vital. Radiant heat can ignite the homes nearby. Fire sprinklers can prevent the flashover from occurring and in many cases put the fire out and save valuable resources in the process, such as water, personnel, and environmental clean up, limited displacement into County shelter, less inconvenience to the family. The mobile home, because of its construction defects, requires fast water.

The U.S. Fire Administration says mobile homes account for 17,700 fires, hundreds of deaths and $155 million in property losses during a typical year. An estimated 345 people die in mobile home fires and another 765 are injured each year, according to the agency's website. The roof, for example, burns through more quickly than a typical residential roof and is not safe for firefighters. Mobile home fires can quickly grow out of control, because there's not as much wallboard and drywall, and there are fewer walls to keep the fire from spreading.

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Consider the benefits: Consider this: a single firefighter using a normal 1-1/2" fire hose can be applying between 175-400 gallons of water per minute when attempting to extinguish a fire. On the other hand, a single fire sprinkler will be flowing only 18- to 40- gallons of water per minute. This means that over a 5-minute period, the following quantities of water are used:

Fire-fighter with 1-1/2" hose:
175 gpm x 5 minutes = 875 gallons of water
400 gpm x 5 minutes = 2,000 gallons of water
Fire sprinkler system:
18 gpm x 5 minutes = 90 gallons of water
40 gpm x 5 minutes = 200 gallons of water

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The record for automatic fire sprinklers is based on the simple fact that there has never been a multiple death of building occupants from a fire developing in a building protected by an automatic fire sprinkler system properly installed and maintained in accordance with nationally recognized
standards (NFPA 13, 13D, 13R, and NFPA 25).

For those who have never experienced a fire the movie version is a myth. Movies such as The Tower Inferno and Back Draft have painted a picture that fire can be dealt with in a very simplistic manner. On television you have probably scene where an individual puts a handkerchief over his nose or a wet blanket over his shoulders and dashes through a burning building to safety. No way, in reality the inside of a building is like the bowls of hell. Professional Fire Fighters equipped with the most modern equipment still find themselves face to face with the most violent, naturally-occurring force on the face of the earth. Surviving an encounter with an un controlled fire is a traumatic experience.

The following is an actual encounter at Residential Fire fight Nassau a suburb of Long Island New York: FF Safety Gear Melts Due To Extreme Heat
May 18, 2007

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Firefighters responded to a column of smoke they saw while getting food supplies for the day. As they drove toward the smoke, they contacted the dispatcher and asked if there was a fire in the area. The alarm was given shortly after contact was made with the dispatch center. The two engine companies arrived to find smoke and fire coming from the front of a two-story, brick veneer wood frame house. After making a 360 walk-around, the first engine officer stated that there was fire coming from the front windows of the structure. He decided to make an "offensive attack" using one (1) pre-connect 1 ¾" hose line, 200' long, attacking the fire from the front of the house. All personnel had on the appropriate PPE, including TPASS and SCBA. Members from the engine attacked the fire entering the front door. The officer stated that he made the attack through the front door based on the "potential" of a trapped victim on the 2nd floor. The officer and one firefighter took a kneeling position on the porch and started to knock down a "heavy volume of fire coming from the door". Members from the 2nd engine company stretched an additional attack line and joined the fight as the first engine darkened the fire at the door. While still on the porch, the first firefighter told his officer that he was getting hot and the two traded positions. The officer made headway as he continued to operate the nozzle into and through the doorway. After entering approximately 3' into the structure and turning to the right, the officer stated that the fire reignited. He and the firefighter were then "engulfed" in fire. Almost immediately the officer's SCBA regulator purged and he heard a popping sound as a blast of hot air hit his face. He retreated to the front door where, once outside the structure, the driver pulled off the officer's mask and helmet. *The mask had a golf ball size blister melted in it while the regulator and voice communicator had melted.* The firefighter had joined with the 2nd engine company and continued to fight fire. The officer took another SCBA from the engine company and with his 2nd firefighter stretched another attack line to the front of the structure. Shortly after they began their attack, the fire was declared defensive and all crews were told to evacuate the structure. No injuries were reported to any immediate supervisor. The gear was examined by the officer and he found that his SCBA face piece had blistered and "popped" leaving a golf ball size hole. *His bunker coat suffered burns to the left shoulder and arm while his bunker pants had a hole burned into the left knee*. Both the officer's and the firefighter's gloves were damaged. As mentioned previously the officer's SCBA regulator was melted as was the firefighter's. *The regulator hose was blistered and bulged at the connection. Further, the firefighter's SCBA mask was distorted from the heat encountered inside the structure as were his gloves*. Other equipment damaged included the PASS, airpak identifier, and helmet shield.

Turnout gear or structural gear for Fire Fighting are required to be protected to the standard NFPA 1971 Protective Assemblies for Structural Fire Fighting and Proximity Fire Fighting. In this document it states the helmet and shield are subjected to a temperature of 2,192 degrees for 15 seconds, so it was obvious what type of

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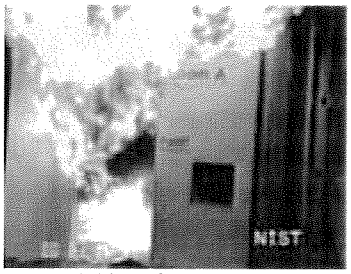
temperatures were endured in the story above in the residential fire. You can imagine what un protected life would have to endure after flashover has occurred.


Sprinkler activation after 60 seconds



non-sprinkler after 120 seconds

Residential Sprinkler
Sensitivity & Response

- Fires must be controlled quickly preventing untenable conditions.
- Tenable conditions were established as:
  - Maximum temperature at eye level of 200°F
  - Maximum ceiling temperature of 500°F
  - Maximum carbon monoxide 0.15%

UL 1626 Fire Test

•Maximum temperature adjacent to the sprinkler 3" below the ceiling and 8" horizontally away is 600°F
•Maximum temperature - 5'-3" above the floor and half the room length away from each wall is 200°F.
–Temperature cannot exceed 130°F for more than a 2 minute period.
•Maximum temperature ¼" behind the finished surface of the ceiling material directly above the test fire is 500°F.
•No more than two residential sprinklers in the test enclosure can operate.

If the residential sprinklers had been installed and working properly in the Residential structure in New York, the Fire Fighters would not endured the high temperatures and quite possibly the fire would have been out.

The response times for the department are based on many factors and vary from 4 to 11 minutes. The chart below indicates the speed at which a fire can develop and how much danger a human life can be exposed to in a very short amount of time.

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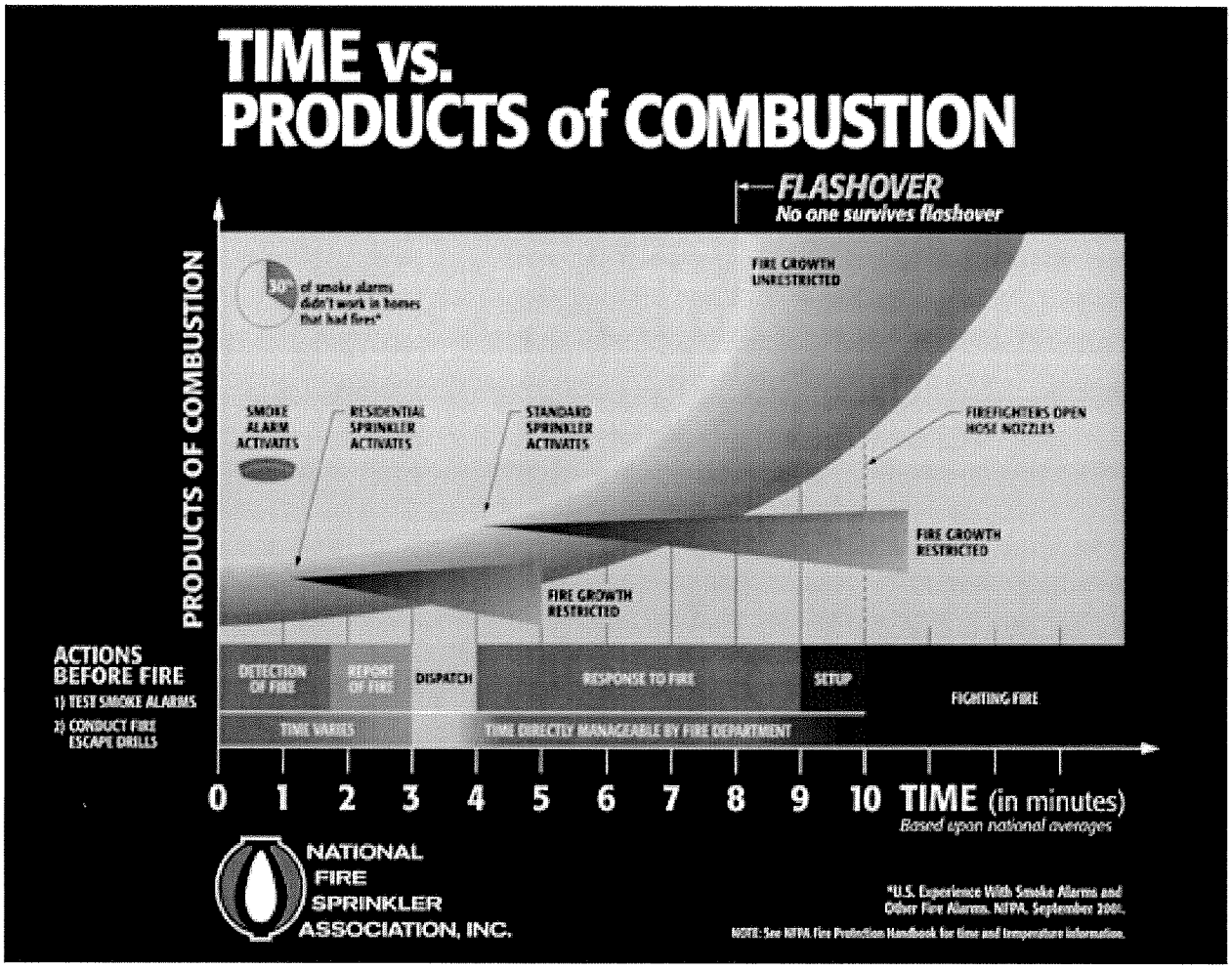

It has been more than 30 years since the concept of residential sprinklers was born,
• In that time, roughly 100,000 Americans have lost their lives in residential fires.
• This is essentially equivalent to wiping out the entire population of the City of Albany, New York in just 30 years.

Discussion of the "PROACTIVE vs. REACTIVE" Elements of Fire Protection
As great as a fire department may be in responding to a fire emergency, or any emergency for that mater, it must be said that in can only respond to the alarm once it has been called in and/or dispatched. Until arrival at the scene of an emergency, there is little that can be accomplished to control and extinguish a fire. Both the fire-fighter and the automatic fire sprinkler work a "24-7-365" schedule (24 hours a day, 7 days a week, 365 days a year). The difference is that a fire sprinkler is located directly over

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the area of fire origin and can operate as soon as the temperature in that area reaches the activation temperature (which in the case of a residential fire sprinkler is 135-170). Similarly, an automatic fire alarm system works a "24-7-365" schedule but can only detect and alert the fire department or occupants in the event of a fire. While the need for detection and notification is essential for a balanced fire protection
This is why as the Fire Fighter who works 24/7 the Fire Sprinkler System is known as the " The silent fire fighter" always prepared, always ready to help those in need and provide a safer path out of harms way.

Cost, How about Cost?

Consider the following: RESIDENTIAL FIRE SPRINKLER SYSTEM INCENTIVES
Based on the study design described above, numerous jurisdictions were found to have incentives in place for the use of residential fire sprinklers. Incentives are generally Fire Protection Research Foundation, "*Home Fire Sprinkler Cost Assessment Study."* September 2008.Incentives for the Use of Residential 7 Fire Sprinkler Systems in U.S. Communities categorized within this research as Financial Tradeoffs, Onsite Design Flexibility, or Offsite Design Flexibility. The specific incentive types which fall under these categories are listed below.
Financial Tradeoffs
1. Reduced or waived fees
2. Reduction of property taxes
3. Special financing options
On-Site Design Flexibility
4. Reduced fire ratings for building assemblies
Off-Site Design Flexibility
5. Reduced requirements for fire hydrants in a development
6. Reduced requirements for minimum road width
7. Reduced requirements for fire flows
8. Reduced requirements for cul-de-sac width
9. Increased allowable dead-end street length
10. Other Financial tradeoffs include incentives such as reduced property taxes, a reduced permit or utility connection fee for the builder, or special financing to support the use of fire sprinklers. Financial tradeoffs typically apply to a particular house (as opposed to the overall development), and generally accrue to its builder or homeowner.
On-site incentives generally consist of reduced fire ratings for building assemblies which are possible when fire sprinklers are installed in a residence.
Off-site incentives are defined as opportunities which revolve around land development which would not generally apply to a single building site. This category includes items like the opportunity to use fewer fire hydrants or downsize water distribution systems due to lower fire flow requirements. In the process of estimating

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the value of developer oriented trade-offs, it is generally assumed that construction is taking place in a new residential subdivision, as opposed to standalone lots. The financial benefit of off-site incentives typically accrues to the land developer.

EXAMPLE:

Luxury/Custom Home:
Item Cost Percentage (%)
Construction $ 193,032 48%
(3,064 sq ft x $63.00 psf)
Developer Profit $ 60,011 15%
Lot $ 80,000 20%
Realtor Fee $ 24,000 6%
Financial $ 20,000 5%
(Loan Points/Interest/Taxes – 14%)
Permit Fees $ 19,343 5%
• Muni: $ 8,578
• School: $ 5,270
• Sanitation: $ 5,495
Fire Protection $ 3,614 1%
• Fire Sprinklers: $ 3,524
• Smoke Detectors: $ 90
Sales Price: $400,000

Another point homebuilders make: Sprinklers are too expensive and will drive up the cost of housing. That resonates with many legislative types because of the overall housing slump, truly a national economic disaster. But the numbers don't seem to add up. In an online discussion for the NFPA, Maria Figueroa, a leader of the NFPA's fire sprinkler initiative, provided the following example:

"Consider a hypothetical $3,000 sprinkler system in a $300,000 home with a 6.5 percent mortgage, a 5 percent credit on a $2,000/year insurance bill, and a combined federal/state income tax rate of 33 percent. The net cost of fire sprinklers, after mortgage-related tax deductions, would be $4.37 per month. This represents a 0.23 percent increase in the monthly payment and roughly equates to the cost of a premium beverage at your local coffee shop.

"So, I pose the question: Just how cheap do sprinklers have to become before they're considered cost-effective?"

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Section 903.2.11.1.1 This section is amended to increase the minimum opening to 36 inches which will allow for fire fighters ingress and to assist in the safe evacuation of occupants that require fire department intervention for egress from a building emergency. In Riverside Counties diverse geological environment the need for adequate access in the time of need is extremely crucial. It is imperative that the rescue personnel be provided with the best possible means of access.

Section 908.3.1 : This will provide a clear procedure for the use and monitoring of highly toxic gas systems. These types of systems are usually dictated by the manufacturers because very little regulation exist in code for the type of alarm system. Clear understanding has to be imposed to regulate and impose clear consise guidelines to follow for proper evacuation and shut down sequences. In the event of an Emergency which can be exsaserbated by the climatic, topograghical or geological conditions of the County, it is necessay to provide the early warning when a Highly Toxic gas may be prevealent. This will provide greater evacuation flexibiltiy and less intrusive means by the responding department to evacuate the building or area.

Section 908.3.2 This section coincides with the statement of reason above.

Section 908.3.3 This section coincides with the statement of reason above

Section 912.2.1 With the different types of apparatus that can be purchased and the different types still employed it is mandatory that the Fire Chief make the determinations of where to connect to, how to connect to it and to supply the system based on the hazard being protected and available water sources and department operating procedures. By developing this language it will require the builder to discuss in detail what the fire department would like to see in order to meet the operating procedures that best meets the fire departments capabilities and insures the best safety practices. Topographically it is difficult enough with the type of terrain that the Fire Department faces and this language will provide the necessary means to coincide with Fire Department Standard Operating Guideline.

Section 914.5 The inaccessibility of windowless and underground structures results in some unique fire problems. Primarily among these are the difficulty of venting smoke and gases from fires and the difficulty in fire fighting and evacuating occupants. By amending the code to require an approved smoke control\removal system it will provide a tenable atmosphere for occupant escape in the event of fire by aiding in the removal of smoke, heat and gases prior to the arrival of fire department personnel.

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The given topographical, geological, and climatic diversities of the County of Riverside further complicate these types of operations in these structures and included is the operational aspects of increased response time. Creating a more tenable environment to assist in the egress component of the building or structure would help create less of impact on first responder resources.

Section 2301.3 This provides guidance on where the commodity classifications should be derived from. It is the installation standard for Fire Sprinkler systems and the basis of design for high piled storage commodity classification and therefore should be addressed before any other standard unless commodity scope, arrangement, and height characteristics are beyond the scope of the document. Geologically these types of occupancies can cause a great impact on resources in the event of a fire and the right type of installation methods and design practices are critical.

Section 2304.2 By requiring client leased or occupant owned warehouses to have a technical report completed by a fire protection engineer will eliminate problems concerning commodity and sprinkler protection. By having an engineer complete a tech report for the proposed or existing building will ensure that adequate protection for the commodities that are proposed will be sufficient. By not having adequate sprinkler protection, it could be detrimental to the building and could also cause loss of life in the event of a fire. Geologically this can be a huge issue due to the seismic activity that the Riverside County experiences. The Engineer can assess the adequate protection for the correct commodity classifications. Ensure the correct Seismic provisions are in place for the type of system to be installed and provide a professional assurance to a very volatile type of occupancy. It takes a vast number of resources to extinguish a fire of this type. By adding this requirement, it will ensure an added level of safety.

Section 4904.3 This section was required under state law section 51178.5.
Within 30 days after receiving a transmittal from the director that identifies very high fire hazard severity zones, a local agency shall make the information available for public review. The information shall be presented in a format that is understandable and accessible to the general public, including, but not limited to, maps.
51179.

Section B-105.2 of Appendix B This has been standard policy within the county for many years without the legislative means behind it. This allows the fire department to still have adequate fire flow mitigation with sprinkler protection and not jeopardize main distribution systems by inadequately under sizing them and have costly up grades for future projects. With the geological diversity, that the County has it is

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mandatory that this requirement be added to ensure adequate water in the event of a fire.

Section C105.1 Footnote C of Appendix C

This has been standard policy within the county for many years without the legislative means behind it. This allows the fire department to still have adequate fire flow mitigation with sprinkler protection and not jeopardize main distribution systems by inadequately under sizing them and have costly up grades for future projects. With the geological diversity, that the County has it is mandatory that this requirement be added to ensure adequate water in the event of a fire.

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ORDINANCE NO. 787.6

AN ORDINANCE OF THE COUNTY OF RIVERSIDE
AMENDING ORDINANCE NO. 787 AND ADOPTING THE
2010 CALIFORNIA FIRE CODE AS AMENDED

The Board of Supervisors of the County of Riverside ordains as follows:

Section 1. Ordinance No. 787 is amended in its entirety to read as follows:

"ORDINANCE NO. 787

AN ORDINANCE OF THE COUNTY OF RIVERSIDE
ADOPTING THE 2010 CALIFORNIA
FIRE CODE AS AMENDED

Section 1. FINDINGS. The Board of Supervisors finds the following:

A. Every three years the State of California adopts a new California Fire Code, as part of the California Building Standards Code, which becomes effective as to the Riverside County 180 days after publication by the California Building Standards Commission.

B. The International Fire Code has been published and adopted, as amended, by the California Building Standards Commission into the California Code of Regulations as Title 24, Part 9, titled the California Fire Code.

C. Riverside County may establish more restrictive standards reasonably necessary to provide fire protection for life and property because of local climatic, geological or topographical conditions.

D. Riverside County has an arid climate with annual rainfall varying from three (3) inches in Blythe to over thirty three (33) inches in Pine Cove. The County also experiences annual hot, dry Santa Ana Winds, which contribute to fires spreading quickly throughout the County.

E. A variety of regions exist within Riverside County including deserts, mountains, brush covered wild lands, the Salton Sea and agricultural

3.20

lands. Additionally, elevations within Riverside County range from three hundred (300) feet below sea level to mountains over ten thousand (10,000) feet. This variety in regions contributes to an increased emergency response time, which necessitates cooperation between local agencies.

F. Riverside County contains a large number of sensitive habitats for various species and vegetation, consists of large open space areas between major urban centers and includes landscapes varying from mountains and hills to valleys and deserts. These conditions impact building and structure location, which impedes emergency access and response.

G. Riverside County extends from Orange County to the State of Arizona and is mixed with congested urban areas, rural lands and wild lands, which increases Riverside County Fire Department response time to emergencies.

H. Two major earthquake faults, the San Andreas Fault and the San Jacinto Fault, bisect Riverside County and numerous minor faults exist throughout it. As a result, a substantial amount of property and persons located in Riverside County are likely to be impacted by earthquakes and will require emergency response and rescue.

I. The topography within Riverside County extends from flat to twenty-five (25) percent slope for habitable land, which causes buildings and structures to be located in unique areas that impact emergency response and access.

J. In addition to earthquakes, a substantial amount of property and persons located in Riverside County are likely to be impacted by landslides, wind erosion, blown sand, flooding and wildfires because of the County's unique climatic, geological and topographical conditions.

K. The additional requirements included herein are necessary to properly protect the health, safety and welfare of the residents and workers of Riverside County.

L. Revenue shortages make it difficult to locate additional fire stations and provide staffing sufficient to control fires in single and multi-story retail, commercial and industrial buildings, making enhanced built in protection necessary.

M. The sections of the California Fire Code may be referred to by the same number used in said published compilation preceded by the words "Riverside County Fire Code Section" or "International Fire Code Section" or "Fire Code Section."

Section 2. PURPOSE. The purpose of this ordinance is to adopt the 2010 California Fire Code, California Code of Regulations, Title 24, Part 9, as amended, to govern the safeguarding of life and property from fire, explosion hazards and hazardous conditions and to regulate the issuance of permits and collection of fees.

Section 3. AUTHORITY. This ordinance is adopted pursuant to Health and Safety Code Sections 17958 and 17958.7 which allow a county to adopt modifications or changes to the California Fire Code that are reasonably necessary because of local climatic, geological and topographical conditions.

Section 4. APPLICATION. The provisions of the 2010 California Fire Code including appendices, as amended by this ordinance, shall apply to the unincorporated area of Riverside County.

Section 5. AMENDMENTS TO CALIFORNIA FIRE CODE. The 2010 California Fire Code is adopted in its entirety except as to the following:

A. **DEFINITIONS**. Section 202 of the California Fire Code is amended to add the following definitions:

BOARD OF SUPERVISORS. The Board of Supervisors for the County of Riverside.

BUILDING OFFICIAL. The Director of the County of Riverside Department of Building and Safety or the Director's designee(s).

CALIFORNIA FIRE CODE. The 2010 Fire Code part of the California Building Standard Code, also known as California Code of Regulations, Title 24, Part 9.

CALIFORNIA RESIDENTIAL CODE. California Code of Regulations, Title 24, Part 2.5.

FIRE CHIEF. The Fire Chief of Riverside County or the Fire Chief's designee.

FIRE PROTECTION ENGINEER. A professional engineer with the education and experience to understand the engineering problems related to safeguarding life and property from fire and fire-related hazards, to identify, evaluate, correct or prevent present or potential fire and fire related panic hazards in buildings, groups of buildings, or communities, and to recommend the arrangement and use of fire resistant building materials and fire detection and extinguishing systems, devices, and apparatus in order to protect life and property.

HAZARDOUS FIRE AREA. Private or public land not designated as state or local fire hazard severity zone (FHSZ) which is covered with grass, grain, brush or forest and situated in a location that makes suppression difficult resulting in great damage. Such areas are designated on Hazardous Fire Area maps filed with the office of the Fire Chief.

B. **DEPARTMENT OF FIRE PREVENTION**

A new Section 103.4.2 is added to Section 103.4 of the California Fire Code to read as follows:

"**103.4.2 Cost Recovery**. Fire suppression, investigation, rescue or emergency medical costs are recoverable in accordance with Health and Safety Code Sections 13009 and 13009.1, as amended. Additionally, any

person who negligently, intentionally or in violation of law causes an emergency response, including, but not limited to, a traffic accident, spill of toxic or flammable fluids or chemicals is liable for the costs of securing such emergency, including those costs pursuant to Government Code Section 53150, et seq, as amended. Any expense incurred by the Riverside County Fire Department for securing such emergency shall constitute a debt of such person and shall be collectable by Riverside County in the same manner as in the case of an obligation under contract, express or implied."

C. **GENERAL AUTHORITY AND RESPONSIBILITIES.**

1. A new Section 104.2.1 is added to Section 104.2 of the California Fire Code to read as follows:

"**104.2.1 Fees.** Fees for services and permits shall be as set forth in Riverside County Ordinance No. 671."

2. A new Section 104.3.2 is added to Section 104.3 of the California Fire Code to read as follows:

"**104.3.2. Authority of the Fire Chief and Fire Department.**

1. The Fire Chief is authorized and directed to enforce all applicable State fire laws and provisions of this ordinance and to perform such duties as directed by the Board of Supervisors.

2. The Fire Chief is authorized to administer, interpret and enforce this ordinance. Under the Fire Chief's direction, the Riverside County Fire Department is authorized to enforce ordinances of Riverside County pertaining to the following:

a. The prevention of fires.

b. The suppression or extinguishment of dangerous or hazardous fires.

c. The storage, use and handling of hazardous materials.

d. The installation and maintenance of automatic, manual and other private fire alarm systems and fire extinguishing equipment.

e. The maintenance and regulation of fire escapes.

f. The maintenance of fire protection and the elimination of fire hazards on land, in buildings, structures and other property, including those under construction.

g. The maintenance of means of egress.

h. The investigation of the cause, origin and circumstances of fire and unauthorized releases of hazardous materials.

3. The following persons are hereby authorized to interpret and enforce the provisions of this ordinance and to make arrests and issue citations as authorized by law:

a. The Unit Chief, Peace Officers and Public Officers of the California Department of Forestry and Fire Protection.

b. The Fire Chief, Peace Officers and Public Officers of the Riverside County Fire Department.

c. The Riverside County Sheriff and any deputy sheriff.

d. The Police Chief and any Police Officer of any city served by the Riverside County Fire Department.

e. Officers of the California Highway Patrol.

f. Code Officers of the Riverside County Code Enforcement Department.

g. Peace Officers of the California Department of Parks and Recreation.

h. The law enforcement officer of the Federal Bureau of Land Management."

3. A new Section 104.12 is added to Section 104 of the California Fire Code to read as follows:

"**104.12 Authority of the Fire Chief.** Except upon National Forest Land, the Fire Chief is authorized to determine and announce the closure of any hazardous fire area or portion thereof. Any closure by the Fire Chief for a period of more than fifteen (15) calendar days must be approved by the Board of Supervisors within fifteen (15) calendar days of the Fire Chief's original order of closure. Upon such closure, no person shall go in or be upon any hazardous fire area, except upon the public roadways and inhabited areas. During such closure, the Fire Chief shall erect and maintain at all entrances to the closed area sufficient signs giving notice of closure. This section shall not prohibit residents or owners of private property within any closed area, or their invitees, from going in or being upon their lands. This section shall not apply to any entry, in the course of duty, by a peace officer, duly authorized public officer or fire department personnel."

D. **FIRE SAFETY AND EVACUATION PLANS.**

Section 404.2 of the California Fire Code is amended to add the following:

"15. Windowless buildings having an occupant load of fifty (50) or more."

E. **FIRE APPARATUS ACCESS ROADS**.

1. Section 503.3 of the California Fire Code is deleted in its entirety and replaced with the following:

"**503.3 Marking**. Fire apparatus access roads, where required, shall be identified by curbs painted red on both the top and face along the entire length of the fire apparatus access road. Where no curbs exists or a rolled curb is installed, a six (6) inch wide red strip shall be applied the full length of the fire apparatus access road or approved posted signs shall be installed in accordance with the Riverside County Fire Department Standards. Exception: On school grounds this requirement shall be implemented as approved by the Fire Chief."

2. Section 503.4 of the California Fire Code is deleted in its entirety and replaced with the following:

"**503.4 Obstruction of fire apparatus access roads**. When other installed obstructions cause the distances from an approved fire department access road to exceed the maximum distance allowed in Section 503, the Fire Chief is authorized to require additional fire protection as specified in Section 901.4.3."

3. A new Section 503.7 is added to Section 503 of the California Fire Code to read as follows:

"**503.7 Loading areas and passenger drop-off areas**. On private properties, where fire apparatus access roads are utilized for loading or unloading or utilized for passenger drop-off or pick-up, an additional eight (8) feet of width shall be added to the minimum required width for the fire apparatus access road."

4. A new Section 503.8 is added to Section 503 of the California Fire Code to read as follows:

"**Authority to designate**. The Riverside County Fire Department shall be the only authority authorized to designate fire apparatus access roads and fire lanes as defined in Section 502."

5. Section 504.1 of the California Fire Code is amended to add the following language to the end of the first paragraph:

"Where ground ladder access is the only means to reach the highest point on the building, the finished grade on all exterior sides of buildings shall be flat and free of any obstructions that would interfere with ground ladder placement. This distance from the building to finished grade shall be determined by the Fire Chief."

F. **EMERGENCY RESPONDER RADIO COVERAGE**.

1. A new Section 510.4 is added to Section 510 of the California Fire Code to read as follows:

"**510.4 Radio coverage**. Except as otherwise provided in this ordinance, no person shall erect, construct or modify any building or structure or any part thereof, or cause the same to be done which fails to support adequate voice or data radio coverage for any emergency response personnel within the structure or the area immediately surrounding the structure or building. A final inspection shall not be approved for any building or structure that fails to comply with this requirement."

2. A new Section 510.4.1 is added to Section 510 of the California Fire Code to read as follows:

"**510.4.1. Radio coverage inside building**. When required by the Fire Chief and in accordance with Fire Department Radio Standards, approved radios, repeaters, relays, signal amplifiers, antennas, coaxial cables, passive signal conductors, conduits and access, secondary power source and other equipment as determined by the Riverside County Fire Department Communications Division shall be provided within buildings to ensure emergency response personnel radio and data communications to and from surrounding buildings, structures and emergency communications centers."

3. A new Section 510.5 is added to Section 510 of the California Fire Code to read as follows:

"**510.5 Scope**. The provisions of this section shall apply to any construction involving new residential, new commercial buildings or structures or commercial tenant improvements that affects more than twenty-five (25) percent of the square footage of the existing building or structure, which is located in a Riverside County Fire Department established marginal or non-existent radio coverage area. The above-referenced construction shall be subject to review by the Riverside County Fire Department Planning and Communications Divisions. In accordance with Riverside County Fire Department Standards, the property owner shall be responsible for any necessary improvements including, but not limited to, installation of new communication facilities and additional public safety radio system enhancement equipment in buildings to improve radio coverage to and from existing communication facilities."

4. A new Section 510.5.1 is added to Section 510 of the California Fire Code to read as follows:

"**510.5.1 Frequency Range.** At the time a building permit is issued, the Riverside County Fire Department Communication Division, in cooperation with appropriate fire and law enforcement departments, shall determine the frequency range or ranges that must be supported in accordance with Riverside County Fire Department Standards. For purposes of this section, adequate radio coverage shall constitute a successful communications test between the building and the communications centers for all appropriate emergency service providers for the building."

G. **BREATHING APPARATUS AIR SYSTEMS.**

A new Section 511 is added to Chapter 5 of the California Fire Code to read as follows:

"**511 Fire Department Breathing Apparatus Air Systems.** All buildings having floors used for human occupancy located seventy-five (75) feet or more above or below the lowest level of fire department vehicular access shall be equipped with an approved breathing apparatus air refilling system. Such system shall provide for adequate pressurized air supply through a permanent piping system for the replenishment of self contained breathing apparatus carried by fire suppression, rescue and other personnel in the performance of their duties. Location, specification of access stations and the installation of such breathing apparatus air refilling system shall be made in accordance with the Riverside County Fire Department Standards."

H. **MECHANICAL REFRIGERATION**.

Section 606.8 of the California Fire Code is deleted in its entirety and replaced with the following:

"**Refrigerant detector**. Machinery rooms that use refrigerant shall have a detector with audible and visual alarms. The alarm signaling devices shallcomply with the audible and visual requirements from the National Fire Protection Association (NFPA) 72. The detector or a sampling tube that draws air into the detector shall be located in an area where a refrigerant leak may be expected to concentrate. The alarm shall be actuated at a value no greater than the corresponding TLV-TWA values shown in the California Mechanical Code for the refrigerant classification. Detectors and alarms shall be placed in one or more locations to insure maximum notifications to all occupants. The detector shall transmit a signal to an approved location in accordance with NFPA 72."

I. **AUTOMATIC SPRINKLER SYSTEMS**.

1. Section 903.2 of the California Fire Code is deleted in its entirety and replaced with the following:

"**903.2 Where required**. In all new buildings and structures which are 3,600 square feet or greater an approved automatic sprinkler system shall be provided regardless of occupancy classification. Where the California Fire Code is requiring more restrictive requirements in Sections 903.2.1, 903.2.1.1, 903.2.1.2, 903.2.1.3, 903.2.1.4, 903.2.1.5, 903.2.2, 903.2.3, 903.2.4, 903.2.5, 903.2.5.2, 903.2.6, 903.2.7, 903.2.8, 903.2.9, 903.2.10, 903.2.11.6 903.2.16, 903.2.18, the more restrictive requirement shall take precedence. The following exceptions in the California Fire Code shall not be allowed:

a. Exception in Section 903.2.3

b. Exception in Section 903.2.6.2

c. Exception in Section 903.2.8

d. Exception in Section 903.2.11

e. Exception in Section 903.2.11.3

f. Exception in Section 903.2.17.1

One and two-family dwellings shall have an automatic fire sprinkler system regardless of square footage in accordance with the California Residential Code. Fire sprinkler systems shall be installed in mobilehomes, manufactured homes and multifamily manufactured homes with two dwelling units in accordance with Title 25 of the California Code of Regulations."

2. Section 903.2.11.1.1 of the California Fire Code is deleted in its entirety and replaced with the following:

"**903.2.11.1.1 Opening dimensions and access.** Openings shall have a minimum dimension of not less than 36 inches (914.4 mm). Such openings shall be accessible to the Riverside County Fire Department from the exterior and shall not be obstructed in a manner that the rescue cannot be accomplished from the exterior."

J. **EMERGENCY ALARM SYSTEMS.**

1. A new Section 908.3.1 is added to Section 908.3 of the California Fire Code to read as follows:

"**908.3.1 Alarms.** The gas detection system shall be monitored per NFPA 72 and shall do the following: 1) initiate a local alarm and 2) transmit a signal to a constantly attended control station when a short-term hazard condition is detected. The alarm shall be both visible and audible in order to provide warning both inside and outside the area where gas is detected. The audible alarm shall be distinct from all other alarms existing at the location."

2. A new Section 908.3.2 is added to Section 908.3 of the California Fire Code to read as follows:

"908.3.2 Shutoff of gas supply. The gas detection system shall automatically close the shutoff valve at the source of the gas supply piping or tubing related to the system being monitored for the detected gas.

Exception: Automatic shutdown is not required for reactors utilized for the production of highly toxic or toxic compressed gases where such reactors are: 1) operated at pressures less than 15 pounds per square inch gauge (psig) (103.4 kPa), and 2) constantly attended, and 3) provided with readily accessible emergency shut-off valves."

3. A new Section 908.3.3 is added to Section 908.3 of the California Fire Code to read as follows:

"908.3.3 Valve closure. The automatic closure of shutoff valves shall be in accordance with the following:

1. Where the gas-detection sampling point initiating the gas detection system alarm is within a gas cabinet or exhausted enclosure, the shutoff valve in the gas cabinet or exhausted enclosure for the specific gas detected shall automatically close.
2. Where the gas-detection sampling point initiating the gas detection system alarm is within a gas room and compressed gas containers are not in gas cabinets or exhausted enclosures, the shutoff valves on all gas lines for the specific gas detected shall automatically close.
3. Where the gas-detection sampling point initiating the gas detection system alarm is within a piping distribution

manifold enclosure, the shutoff valve for the compressed container of specific gas detected supplying the manifold shall automatically close.

Exception: When the gas-detection sampling point initiating the gas detection system alarm is at a use location or within a gas valve enclosure of a branch line down-stream of a piping distribution manifold, the shutoff valve in the gas valve enclosure for the branch line located in the piping distribution manifold enclosure shall automatically close."

K. **FIRE DEPARTMENT CONNECTIONS**.

Section 912.2.1 of the California Fire Code is deleted in its entirety and replaced with the following:

"**912.2.1 Visible Locations**. Fire department connections shall be located on the front access side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as otherwise approved by the Fire Chief. The location of fire department connections shall be approved and installed in accordance with all the following:

1. Within 50 feet of an approved roadway or driveway and arranged so that hose lines can be readily attached to the inlets without interference from any nearby objects including buildings, fences, posts, plantings, or other fire department connections or otherwise approved by the Fire Chief.
2. Within 200 feet of an approved hydrant.
3. The inlet height shall not be less than 18 inches or more than 48 inches above grade.

4. Guard posts or other approved means may be required to protect fire department inlet connections from vehicular damage.

5. Fire department connection shall not be allowed in the rear of any building."

L. **FIRE PROTECTION BASED ON SPECIAL DETAILED REQUIREMENTS OF USE AND OCCUPANCY.**

Section 914.5 of the California Fire Code is deleted in its entirety and replaced with the following:

"914.5 Underground and windowless buildings. Underground and windowless buildings shall comply with Sections 914.5.1 through 914.5.5, each section relating to Underground buildings shall also include Windowless buildings."

M. **HIGH-PILED COMBUSTIBLE STORAGE.**

No. 7 of Section 2301.3 of the California Fire Code is amended to read as follows:

"7. Locations and classification of commodities in accordance with Section 2303 and NFPA 13."

N. **DESIGNATION OF HIGH-PILED STORAGE AREAS.**

A new Section is added to Section 2304.2 of the California Fire Code to read as follows:

"2304.2.1 Minimum requirements for client leased or occupant owned warehouses. Designs of an automatic sprinkler system for client leased or occupant owned buildings containing high pile storage shall be based on the requirements of NFPA 13. The responsible fire protection engineer shall perform a survey of the

building to determine commodity classification, storage configuration, building height and other information related to the development of an appropriate sprinkler system design. The fire protection engineer shall also make reasonable efforts to meet with the building owner or operator to understand seasonal or customer related fluctuations to the stored commodities, storage height, and configuration. The sprinkler design shall be based on the most demanding requirements determined through the onsite survey and discussions with the building owner or operator. The technical report shall describe the basis for determining the commodity and sprinkler design selection, how the commodities will be isolated or separated, and include referenced design document(s), including NFPA 13 or the current applicable factory mutual data sheets. If a specific fire test is used as the basis of design, a copy of the fire test report shall be provided at the time of plan review."

O. **FIRE HAZARD SEVERITY ZONES**.

A new Section is added to Section 4904 of the California Fire Code to read as follows:

"4904.3 High Fire Hazard Severity Zone Maps. In accordance with Government Code Sections 51175 through 51189, Very High Fire Hazard Severity Zones are designated as shown on a map titled Very High Fire Hazard Severity Zones, dated April 8, 2010 and retained on file at the office of the Fire Chief and supersedes other maps previously adopted by Riverside County designating high fire hazard areas."

Section 6. APPENDICES TO CALIFORNIA FIRE CODE. The appendices to the California Fire Code are adopted in their entirety except as to the following:

A. Appendix B.

The first sentence of Section B105.2 of Appendix B is amended to read as follows:

"B105.2. Buildings other than one-and two-family dwellings. A reduction in required fire flow of up to fifty (50) percent as approved is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the California Fire Code."

B. Appendix C.

Footnote c. to Table C105.1 in Appendix C is amended to read as follows:

"Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, serving one and two-family residential developments, standard fire hydrants shall be provided at spacing not to exceed 1000 feet along the tract boundary for transportation hazards. When serving multi-family, commercial and industrial developments, super or enhanced fire hydrants as determined by the Fire Chief shall be provided at spacing not to exceed 500 feet of frontage for transportation hazards."

C. Appendix D. Appendix D shall not be adopted.

D. Appendix I. Appendix I shall not be adopted

Section 7. VIOLATION AND PENALTIES. It shall be unlawful for any person, firm, corporation or association of persons to violate any provision of this ordinance, or to violate the provisions of any permit granted pursuant to this ordinance. Punishments and penalties for violations shall be in accordance with Health and Safety Code Sections 17995 through 17995.5."

Section 2. SEVERABILITY. If any provision, clause, sentence or paragraph of this ordinance or the application thereof to any person or circumstances shall be held invalid, such invalidity shall not affect the other provisions of this ordinance which can be given effect without the invalid provision or application, and to this end, the provisions of this ordinance are hereby declared to be severable.

Section 3. EFFECTIVE DATE. This ordinance shall take effect thirty (30) days after its adoption.

BOARD OF SUPERVISORS OF THE COUNTY
OF RIVERSIDE, STATE OF CALIFORNIA

By: Bob Buster

Chairman Bob Buster

ATTEST: Kecia Harper-Ihem
CLERK OF THE BOARD

By:

Deputy

(SEAL)

APPROVED AS TO FORM
January 27, 2011

By:

MICHELLE CLACK
Deputy County Counsel

MPC:mdk
01/12/11
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STATE OF CALIFORNIA)
) ss
COUNTY OF RIVERSIDE)

I HEREBY CERTIFY that at a regular meeting of the Board of Supervisors of said county held on February 15, 2011, the foregoing ordinance consisting of 3 Sections was adopted by the following vote:

AYES: Buster, Tavaglione, Stone, Benoit, and Ashley

NAYS: None

ABSENT: None

DATE: February 15, 2011

KECIA HARPER-IHEM
Clerk of the Board
BY: _____
Deputy

SEAL

Item 3.20